



West Fork of the White River TMDL

Technical Memorandum No. 1A

To: Staci Goodwin, Jennifer Hutchison/IDEM

From: Gary Mercer, Heather Cheslek/CDM

Date: January 15, 2003

Subject: White River TMDL

Available Cyanide, Ammonia, E. coli Bacteria and Dissolved Oxygen Data

CDM has gathered the available data from the City of Indianapolis Office of Environmental Services (OES), the Marion County Health Department (MCHD), and the Indiana Department of Environmental Management (IDEM) pertaining to the White River from the upstream boundary of Marion County downstream to Waverly for use in performing a Total Maximum Daily Load (TMDL) for cyanide, ammonia, *E. coli* bacteria, and dissolved oxygen. The scope of the study was extended to Waverly in order to assess the impacts from CSO and urban development on the White River downstream of Indianapolis. The following paragraphs summarize the available data for each parameter from each source. These sites are also presented on the map attached to this memo.

Cyanide

The City of Indianapolis has collected samples and performed total cyanide analysis at six locations on the White River. These samples were analyzed and continue to be analyzed on a quarterly basis from May 1991 to present. Sampling locations are:

- 82nd Street
- Morris Street
- Harding Street
- Tibbs/Banta
- Southwestway Park
- Waverly and State Road 144

Ammonia

The City of Indianapolis has collected samples and performed ammonia analysis at six locations on the White River. These samples were analyzed and continue to be analyzed on a monthly basis from May 1991 to present. Sampling locations are:

- 82nd Street
- Morris Street
- Harding Street
- Tibbs/Banta
- Southwestway Park
- Waverly and State Road 144

***E. coli* Bacteria**

The City of Indianapolis has collected samples and performed *E. coli* bacteria analysis at seven locations on the White River. These samples were analyzed and continue to be analyzed on a monthly basis from May 1991 (30th Street from February 1998) to present. Sampling locations are:

- 82nd Street
- Morris Street
- Harding Street
- Tibbs/Banta
- Southwestway Park
- Waverly and State Road 144

The MCHD has also collected monthly samples at eight sites and five times per month at one location, New York Street, on the White River. All locations were sampled from April to October each year. The locations along with their beginning and ending sampling dates are shown below.

- 96th Street – April 2000 to October 2001
- Marina Drive – April 1998 to October 2001
- Ruth Drive – April 1998 to October 2001
- Broad Ripple Park ramp – April 1998 to October 2001
- 6800 Cornell Avenue – April 1998 to October 2001

- Lake Indy - June 1996 to October 2001
- New York Street - May 2001 to present
- Raymond Street - June 1996 to October 2001

Dissolved Oxygen

The City of Indianapolis has collected samples and performed dissolved oxygen analysis at six locations on the White River. These samples were analyzed and continue to be analyzed on a monthly basis from May 1991 to present. Sampling locations are:

- 82nd Street
- Morris Street
- Harding Street
- Tibbs/Banta
- Southwestway Park
- Waverly and State Road 144

The MCHD has also collected monthly dissolved oxygen samples at eight sites and five times per month at one location, New York Street, on the White River. All locations were sampled from April to October each year. The locations along with their beginning and ending sampling dates are shown below.

- 96th Street - April 2000 to October 2001
- Marina Drive - April 1998 to October 2001
- Ruth Drive - April 1998 to October 2001
- Howland at Crittenden - April 1998 to October 2001
- Broad Ripple Park ramp - April 1998 to October 2001
- 6800 Cornell Avenue - April 1998 to October 2001
- Lake Indy - June 1996 to October 2001
- New York Street - May 2001 to present
- Raymond Street - June 1996 to October 2001

The City of Indianapolis OES has installed sondes in the White River that monitor field parameters and has collected dissolved oxygen data every fifteen-minutes at several locations on the White River since 1997. These sites and associated dates of operation are:

- 16th Street: September 3, 1998 – October 12, 1998; June 21, 1999 – November 15, 1999; July 9, 2001 – December 18, 2001;
- 50 yards south of Raymond Street: August 11, 1998 – November 6, 1998;
- Harding Street: September 30, 1998 – November 12, 1998;
- South of the Eagle Creek confluence with White River: October 23, 1997 – October 30, 1997;
- Indianapolis Power and Light and White River: August 11, 1998 – November 6, 1998; June 8, 1999 – November 17, 1999; July 13, 2000 – November 28, 2000; June 29, 2001 – November 21, 2001;
- Waverly and State Road 144: September 3, 1998 – September 24, 1998; May 27, 1999 – November 10, 1999; July 27, 2000 – November 15, 2000; June 27, 2001 – December 13, 2001;
- Centerton: September 3, 1998 – September 24, 1998

The Indiana Department of Environmental Management has collected dissolved oxygen data at thirteen sites on the White River. The locations of the sites and frequency of sampling are as follows:

- 86th Street in Nora – Monthly from March 1991 to present and Weekly from March 2001 to July 2001
- Raymond Street - Weekly from March 2001 to July 2001
- Waverly and State Road 144 – Monthly from April 1991 to present

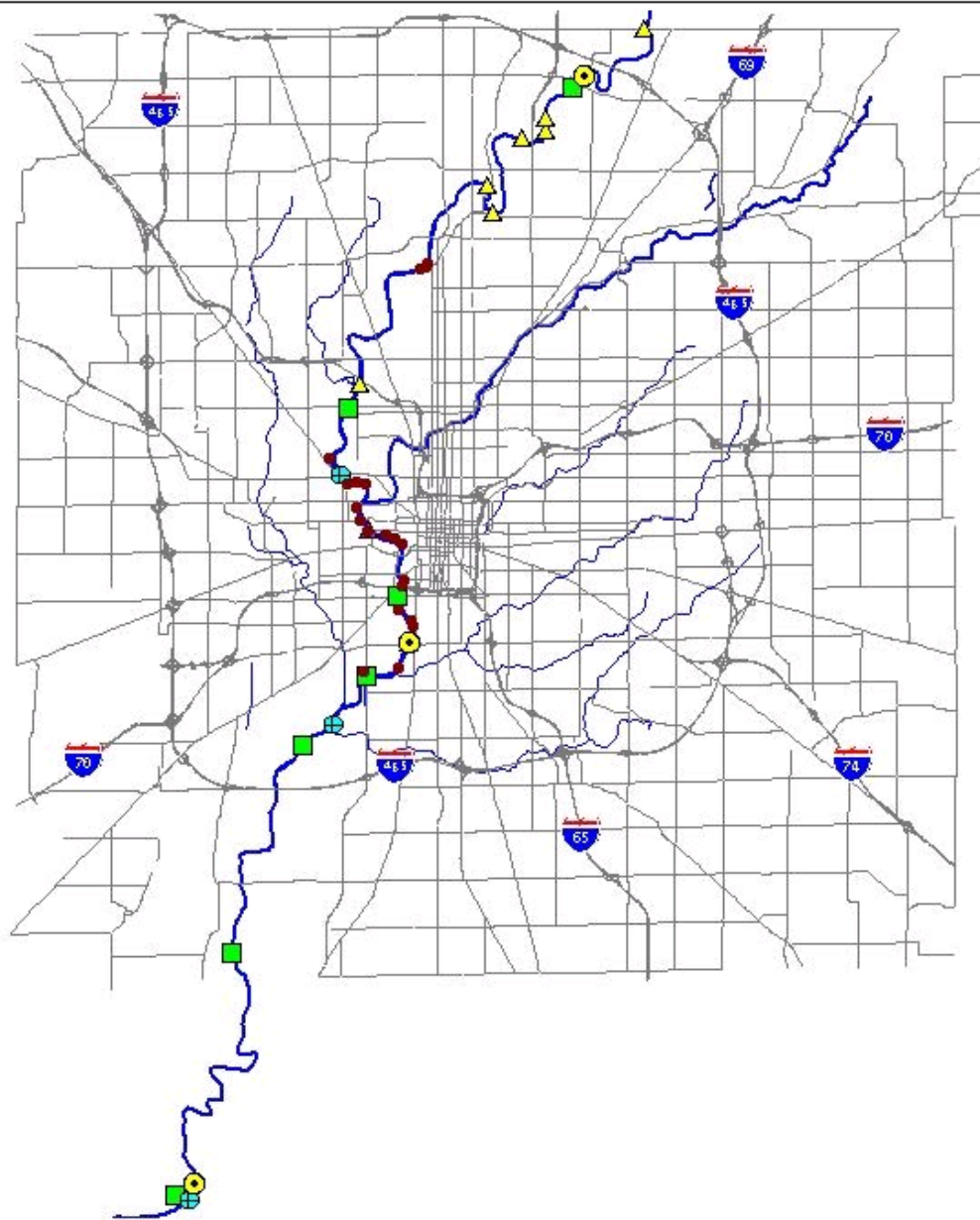
There were also several limited sampling sites within Marion County that were utilized by IDEM. These are:

- 37 feet from right bank and on left bank in line with yellow and brown building next to water tower – Sampled July 22, 2000
- Approximately 100 feet downstream of Stout Dam on east bank – Sampled July 25, 2000
- Under power lines above Harding Street – Sampled July 27, 2000
- Under power lines, across from and opposite bank of Belmont AWTP effluent outfall – Sampled July 27, 2000 and August 8, 2000
- Belmont AWTP Effluent Outfall – Sampled July 27, 2000 and August 8, 2000

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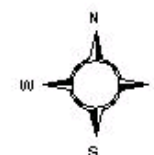
- Adjacent to Water Tower, 75 feet from right bank – Sampled July 27, 2000
- Over old sheet piling, 162 feet from USGS Gage Office, 38 feet from bank – Sampled July 27, 2000
- 160 feet from right bank, 1000 feet from conveyor building, 500 feet downstream from gage – Sampled July 27, 2000
- Near west bank, adjacent to Indianapolis Power & Light water tower – Sampled July 27, 2000
- 210 feet from south corner of intake control building, 200 feet from north corner of building – Sampled July 27, 2000

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LEGEND

- CSD
- ▲ MCHD Sampling Locations - Sampled Monthly
- ▲ MCHD Sampling Locations - Sampled 5 times per month
- OES Sampling Sites - Sampled Monthly for Ammonia, E.coli, and DO and Quarterly for Cyanide
- OES Continuous DO Sampling Sites
- IDEM Sampling Locations - Sampled Monthly and Weekly from March 2001 to July 2001
- Waterway
- Major Roadway



Water Quality Sampling Sites on the White River City of Indianapolis

As of Spring 2002